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February 27, 2003

OSWER Docket  
Environmental Protection Agency  
Mailcode: 5305-G  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

**RE: Subsurface Vapor Intrusion Guidance**

Dear Sir or Madam:

FMC Corporation is a diversified chemical company composed of three chemical businesses – Agricultural Products, Specialty Chemicals and Industrial Chemicals. FMC is involved in, and has completed, many response actions under RCRA, CERCLA and state clean up programs. By this memorandum, we are providing comments to EPA's Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance) [67 Fed. Reg. 71169, et seq. (November 29, 2002), providing notice as to the issuance of the draft Guidance document and soliciting comments by February 27, 2003].

FMC Corporation submits that the Guidance as currently implemented has the potential to unnecessarily and significantly delay final action at RCRA and CERCLA sites, or in voluntary brownfield cleanups where authorities choose to incorporate it. While this document is a draft and is only proposed as "guidance", EPA regions and state environmental agencies have been actively using it, or predecessors of it, over the past year or two [in the Federal Register Notice EPA recommends use of the draft guidance document now]. Its issuance has conferred on it a status that is being recognized by both EPA personnel and state environmental officials as well beyond its intended use as a discretionary screening tool, and is having the force of regulatory authority in cleanup and redevelopment decisions.

Without commenting specifically on the merits of the elements of the Guidance, including the Johnson and Ettinger model, we believe the Guidance as it is now being administered, can lead to significant delays in cleanup and may take on an importance that does not correspond with the risks it seeks to address. Moreover, it is currently being applied as a stand alone, separate remedial parameter and therefore is not being integrated with the measurement of other site risks or effectively subsumed in existing RCRA and CERCLA regimes and in safety standards established by OSHA and NIOSH. After considerable effort by the Agency in creating a more efficient approach to regulatory decision

making, the issuance of this Guidance serves to complicate decision making and delay the return of sites to desirable uses.

We base these comments on independent experiences in which the Guidance was applied late in the remediation process at two separate sites that were near finalization and approval. It is our experience from these experiences that the following conclusions may be drawn:

1. In addition to being highly conservative in estimating the potential for Vapor Air Intrusion, the Johnson and Ettinger Model is a complex risk analysis tool that requires significant additional expertise by all parties to implement. It is a time intensive and costly methodology that is not yet fully field tested, and therefore not widely understood by the Agency, state regulatory agencies, contractors and responsible parties. We respectfully submit that the Agency consider how it can best be integrated into existing regulatory regimes for cleanup under both CERCLA and RCRA rather than being applied as an “add on” to approved cleanup plans. To suggest that the Guidance does not “impose any requirements or obligations on EPA, states or the regulated community” does not accurately reflect the extent to which it is in fact having quite the opposite impact.
2. State agencies are not able or staffed to utilize this sophisticated model without being provided significant additional resources for training and implementation. As stand alone Guidance, it is difficult for state administrators to make judgments regarding the criticality of findings, and what amendments to already approved remedial plans need to occur.
3. While the guidance is intended to be integrated into existing “Current Human Exposures Under Control EI (Environmental Indicator) determinations at RCRA and NPL sites, as well as in CERCLA remedial investigations and RCRA facility investigations,” it is not clear what is to be done at sites where EI determinations have already been made or final remedies have been selected using existing methodologies. Indeed, our experience is that at these more mature sites the existence of this Guidance (and pressure by the Agency to apply it) is causing confusion and some back tracking on earlier assessments. Where remedial work has already begun, or is nearing completion, this can be problematic and cause serious delay, often without any change in result.

These recommendations are based upon two site-specific examples where the utilization of vapor intrusion issues had detrimental impacts in unnecessarily delaying redevelopment when no risk was identifiable.

In the first instance, the state agency raised the issue of potential vapor intrusion at a site where the investigation had already been completed, and soil and groundwater cleanup already addressed through interim measures. In approving the corrective measures study (CMS) submitted, the agency also advised that an indoor air health risk assessment would be required under the

new EPA guidance (the 2001 draft guidance) during the implementation phase. FMC conducted and submitted the new assessment. But the state agency, lacking an understanding of the new methodology and with questions regarding the validity of the Johnson and Ettinger model, advised that additional data would be needed or alternatively suggested installation of engineering controls such as vapor barriers or subsurface ventilation and monitoring systems. Eventually, after a nine-month delay the state agency agreed that even under "worst case" assumptions the levels of potential vapors would not present an unacceptable risk, and accepted the risk assessment report without the need for any further data or controls. However, the actions by the state agency, including the further risk assessment and the extended process of review and acceptance, were used by a purchaser under contract as a basis for not closing on the sale, and subsequently for termination of the contract. Thus, redevelopment of the site has been delayed.

In the second instance, the state agency had issued "comfort letters" in 1998 and 2000, that ground water contamination from an off site, industrial source did not present a health risk that would prevent redevelopment of a vacant FMC site that had not been used for any industrial purposes. FMC entered into an agreement for sale of the property for redevelopment for residential purposes (similar to the redevelopment that had previously occurred on an adjoining site). However, in the course of due diligence the buyer was advised by the state agency that based on recent concerns with potential vapor intrusion and the development of "look up" tables in response to these concerns, the comfort letters should no longer be considered valid and redevelopment of the property would be problematic and, at best, subject to new requirements. The purchaser has now terminated the contract. The path forward at this site is currently clouded by the impact of the Guidance's implementation.

Thus, while the Agency may suggest in its proposal that the Guidance is not meant to have the force of regulatory authority, our experience is otherwise. Even before its issuance, state agencies have wrestled with and attempted to apply the elements contained in it. Moreover, these issues have been imposed at the eleventh hour to override previous regulatory determinations to the detriment of effective redevelopment.

Protecting human health from potential detrimental exposures from volatile organic compounds which may present an indoor air risk is an important function of existing EPA remedial investigations in both RCRA and CERCLA. The agency currently has adequate risk assessment methods for determining these risks and addressing them in the context of the remedial design phases of both programs. While the new Guidance may indeed be useful in enhancing the ability of federal and state environmental officials to discern and address them, we would respectfully recommend that the Guidance be accompanied by a clearer directive as to how and when it should be utilized. To impose a new methodology on sites which have an approved FS or CMS or are even well into the remediation implementation phase, as was the case in the first example above, seems inappropriate and likely to impose unnecessary delay in cleanup and redevelopment. It is also important that the Guidance be accompanied by a commitment by the Agency to train both the regulated community as well as

regulatory agency field personnel at both the federal and state level as to application, interpretation, and use.

We encourage the Agency to consider these comments prior to issuance of its final guidance.

Very truly yours,

***Original signed and sent by Certified Mail***

Robert T. Forbes  
Director, Environment  
FMC CORPORATION  
215/299-6260